

**WE CLAIM AS OUR INVENTION:**

1. A method for automatically controlling X-ray dosage for producing an image by computed tomography, comprising the steps of:

using an X-ray tube in a computed tomography apparatus operable with a tube current, obtaining a plurality of reference measurements by irradiating a plurality of different phantoms, with respectively different radiation attenuation, with X-rays from the X-ray tube, to produce a computed tomography image of each phantom;

for each image of each of said phantoms, setting a tube current of said X-ray tube that produces a predetermined level of noise in the image for that phantom representative of an acceptable image quality; and

subsequently producing a computed tomography image of an examination subject with said computed tomography apparatus by irradiating the examination subject with X-rays from said X-ray tube, and automatically limiting the tube current of the X-ray tube for respective regions of said examination subject exhibiting attenuation comparable to the attenuation of at least one of said phantoms, dependent on the reference measurement for said at least one of said phantoms, to obtain a noise level and image quality in the image of said at least one region of the examination subject comparable to the noise level and image quality in the image of that phantom.

2. A method as claimed in claim 1 comprising employing a water phantom as said phantom.

3. A method as claimed in claim 2 comprising storing values for each reference measurement for each phantom in a table for different load currents, and automatically adjusting said tube current with a tube load computer, connected to said X-ray tube and having access to said table, while irradiating said examination subject.